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PATENT APPLICATION
10/789,469

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Uwe Nigrin
Serial No.: 10/789,469
Date Filed: February 27, 2004
Examiner: Trieu, Theresa
Group Art Unit: 3748
Confirmation No.: 8433
Title: **VANE CELL PUMP**

MAIL STOP – APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Further to the notice of appeal submitted on February 27, 2008, Appellant hereby submits this appeal brief according to §41.37.

APPELLANT'S BRIEF (37 C.F.R. § 41.37)

This brief is submitted in support of Appellant's notice of appeal from the decision dated February 1, 2008, of the Examiner finally rejecting claims 1-14 of the subject application.

I. REAL PARTY IN INTEREST

This application is currently owned by Siemens Aktiengesellschaft, as indicated by an assignment recorded on February 27, 2004, in the Assignment Records of the United States Patent and Trademark Office at Reel 015034, Frame 0512.

II. RELATED APPEALS AND INTERFERENCES

There are no known appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision regarding this appeal.

III. STATUS OF CLAIMS

Claims 1-14 are pending in this application and all stand rejected under a Final Office Action mailed November 27, 2007 and Advisory Action mailed February 1, 2008. No claims were cancelled during prosecution. No claims have been allowed or withdrawn. Appellant's presents Claims 1-14 for appeal. Appendix A shows all pending claims.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 1 recites a vane cell pump for delivering fluids comprising a rotor (2). *See*, for example, specification, page 3, paragraph [0007] and page 6, paragraph [0025]. The vane cell pump further comprises a cam ring (3). *See*, for example, specification, page 3, paragraph [0007] and page 6, paragraph [0026]. The vane cell pump further comprises a plurality of vanes (4) which are pre-tensioned by means of spring

elements (5). *See*, for example, specification, page 3, paragraph [0007] and page 6, paragraph [0028]. The spring elements (5) are an integral part of the rotor (2), wherein the rotor (2) is made of plastic and the spring elements are captively molded into the rotor (2). *See*, for example, specification, page 3, paragraph [0007] and page 6, paragraph [0027-0028].

Independent Claim 8 recites a vane cell pump for delivering fluids, comprising a plastic rotor (2) having integrated spring elements (5, 6) captively molded into the rotor (2), *See*, for example, specification, page 3, paragraph [0007] and page 6, paragraph [0025-0028]. The vane cell pump further comprises a cam ring (3). *See*, for example, specification, page 3, paragraph [0007] and page 6, paragraph [0026]. The vane cell pump further comprises a plurality of vanes (4) whereby the vanes are pre-tensioned by said spring elements (5, 6). *See*, for example, specification, page 3, paragraph [0007] and page 6, paragraph [0027-0028].

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 2, 6, 8, 9 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Publication No. JP 62-000684 filed by Taguchi (“Taguchi”).

Claims 1-4, 6, 8-11, and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Publication No. JP 56-151296 filed by Udono et al. (“Udono”).

Claims 5 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Udono in view of design choice.

Claims 7 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Udono in view of design choice as applied to Claims 1 and 8 above, and further in view of German Publication No. DE 1005007602 filed by Grossner (“Grossner”).

VII. ARGUMENT

The Examiner stated in the Final Office Action:

“on the contrary, as stated above, the Taguchi ‘684 and Udono ‘296 reference does anticipate the invention as claimed since it teaches all of the claimed limitations. Thus, the prima facie of obviousness has been established and claims 1-14 are remained rejected as discussed above”

Final office Action, dated 11/27/2007, page 6, last paragraph. The Examiner states in this paragraph that the claimed invention is anticipated, however, all rejections are based on obviousness. It is not quite clear from this paragraph what type of rejection is currently used. In the following paragraphs A-D, an obviousness rejection is assumed.

A. Claims 1, 2, 6, 8, 9 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Publication No. JP 62-000684 filed by Taguchi (“Taguchi”).

Independent claim 1 and 8 includes the limitation that the spring elements are captively molded into the rotor and that the spring elements are an integral part of the rotor. *Taguchi* neither discloses nor suggests this limitation. The Examiner stated in the final office action that a recitation of the product by process claim which is rejected over a prior art product that appears to be identical, although produced by a different process, the burden is upon the applicant to come forward with evidence establishing an unobvious difference between the two. Final office Action, dated 11/27/2007, page 6, lines 1-5. Applicant respectfully disagrees. First, the claim language does not include a product by process limitation. Applicant claims a physical condition, namely that the spring elements are an integral part of the rotor and that the spring elements are captively molded into the rotor. Second, the arrangement of *Taguchi* does not appear to be identical to the present independent claims.

Taguchi discloses a rotor 14 into which holding elements 18 are inserted. A corrugated spring 17 has to be fitted to a holding element. Thus, *Taguchi* requires two separate elements 17 and 18 that have to be assembled and inserted into the rotor 14. As

stated in the present specification, the vane cell pump according to the present application does not require a cumbersome assembly and time consuming positioning of the spring elements. See, for example, specification, page 7, paragraph [0030]. Contrary to this, the vane cell pump has a rotor with integrated spring elements. The holding element 18 of Taguchi is clearly not part of the rotor 14 and therefore not an integral part of the rotor. Therefore, spring 17 also cannot form an integral part of the rotor 14

In the Advisory Action, dated February 1, 2008, the Examiner stated that “Applicant should note that the language “integral” is sufficiently broad to embrace constructions united by such means as fastening and welding (In re Hotte (C.C.P.A.) 157 U.S.P.Q. 326).” Advisory Action, page 2, lines 4-5. Applicant respectfully disagrees. The Examiner is clearly misinterpreting *in re Hotte*. According to *in re Hotte*, the C.C.P.A. states that the term “integral” is not necessarily restricted to one piece structures but does not state that two separate and separable pieces can be “integral.” In particular, the terms “fastening and welding” inherently define that at least an inseparable unit must be formed by the elements. In fact, Applicant uses the term “integral” consistent with such an interpretation of *in re Hotte* because it describes an embodiment of one unit consisting of a plurality of parts, namely an integral rotor into which spring elements are captively molded, thus, being a part of the rotor. See, specification, page 6, paragraph [0028].

According to the Examiner’s interpretation two elements that are simply pieced together and may be separated at any time, as for example disclosed in *Taguchi*, fall allegedly under the term “integral.” Such an interpretation renders the term “integral” completely meaningless as any random elements placed next to each other could be considered “integral.” As stated above, contrary to the Examiner’s argument, the term “integral” requires that, for example, two elements have to be joined by some means such as fastening and welding. This is clearly not the case in *Taguchi* as *Taguchi* neither discloses nor mentions any type of fastening means to couple assembly 17/18 with rotor 14 to form an inseparable unit.

As stated above, according to *Taguchi*, spring 17 is not fastened by any means to holding element 18. Spring 17 is merely fitted into holding element 18. Thus, no welding or

molding is present. The spring elements can be removed at any time and therefore cannot be considered an integral part of the rotor.

Most importantly, *Taguchi* does not disclose that the spring elements are an integral part of the rotor. The spring elements are merely fitted into holding element 18. However, holding element 18 is not a rotor. *Taguchi* clearly identifies the rotor with numeral 14. No fastening and/or welding of these elements is disclosed.

Taguchi does not disclose that rotor is made of plastic. The Examiner stated that using plastic as a material for the rotor is a mere design feature which is obvious to a person skilled in the art. Applicant respectfully disagrees. To accomplish the limitation of making the spring elements an integral part of the rotor the rotor needs to be “moldable” as further claimed by the limitation that the spring elements are captively molded into the rotor. Hence, the fact that the rotor is made of plastic is not a mere design choice. It is necessary, to ensure that the spring elements can form an integral part of the rotor.

Hence the independent claims 1 and 8 are not rendered obvious by *Taguchi*. Applicants respectfully submit that the dependent Claims 2, 6, 9, and 13 are allowable at least to the extent of the independent Claim 1 or 8 to which they refer, respectively. Thus, Applicants respectfully request reconsideration and allowance of these dependent Claims.

B. Claims 1-4, 6, 8-11, and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Publication No. JP 56-151296 filed by Udono et al. (“Udono”).

Independent claim 1 and 8 includes the limitation that the spring elements are captively molded into the rotor and that, thus, the spring elements are an integral part of the rotor. *Udono* neither discloses nor suggests this limitation. The Examiner stated in the final office action that a recitation of the product by process claim which is rejected over a prior art product that appears to be identical, although produced by a different process, the burden is upon the applicant to come forward with evidence establishing an unobvious difference between the two. Final office Action, dated 11/27/2007, page 6, lines 1-5. Applicant respectfully disagrees. First, the claim language does not include a product by process limitation. Applicant claims a physical condition, namely that the spring elements are an integral part of the rotor and that the spring elements are captively molded into the rotor.

Moreover, the arrangement of *Udoni* does not appear to be identical to the present independent claims.

Udoni clearly disclose a single actuating body 23 which is housed in a concave part 22. The rotor of *Udoni*'s vane pump is identified with numeral 3 and is kept completely separate from actuating body 23. Thus, it is completely unclear how the term "housing" can be interpreted to encompass the limitation "the spring elements being an integral part of the rotor." Because the spring element and the rotor 3 are clearly two separate elements, *Udoni* does not render the current independent claim 1 obvious.

In the Advisory Action, dated February 1, 2008, the Examiner stated that "Applicant should note that the language "integral" is sufficiently broad to embrace constructions united by such means as fastening and welding (In re Hotte (C.C.P.A.) 157 U.S.P.Q. 326)." Advisory Action, page 2, lines 4-5. Applicant respectfully disagrees. The Examiner is clearly misinterpreting *in re Hotte*. According to *in re Hotte*, the C.C.P.A. states that the term "integral" is not necessarily restricted to one piece structures but does not state that two separate and separable pieces can be "integral." In particular, the terms "fastening and welding" inherently define that at least an inseparable unit must be formed by the elements. In fact, Applicant uses the term "integral" consistent with such an interpretation of *in re Hotte* because it describes an embodiment of one unit consisting of a plurality of parts, namely an integral rotor into which spring elements are captively molded, thus, being a part of the rotor. See, specification, page 6, paragraph [0028].

According to the Examiner's interpretation two elements that are simply pieced together and may be separated at any time, as for example disclosed in *Udoni*, fall allegedly under the term "integral." Such an interpretation renders the term "integral" completely meaningless as any random elements placed next to each other would be considered "integral." As stated above, contrary to the Examiner's argument, the term "integral" requires that for example two elements to be joined by some means such as fastening and welding. This is clearly not the case in *Udoni* as *Udoni* neither discloses nor mentions any type of fastening means to couple actuating body 23 with rotor 3 to form a unit.

Also, *Udoni* does not disclose that rotor is made of plastic. The Examiner stated that using plastic as a material for the rotor is a mere design feature which is obvious to a person

skilled in the art. Applicant respectfully disagrees. To accomplish the limitation of making the spring elements an integral part of the rotor the rotor needs to be “moldable” as further claimed by the limitation that the spring elements are captively molded into the rotor. Hence, the fact that the rotor is made of plastic is not a mere design choice. It is necessary, to ensure that the spring elements can form an integral part of the rotor.

Hence the independent claims 1 and 8 are not rendered obvious by *Udono*. Applicants respectfully submit that the dependent Claims 2-4, 6, 9-11, and 13 are allowable at least to the extent of the independent Claim 1 or 8 to which they refer, respectively. Thus, Applicants respectfully request reconsideration and allowance of these dependent Claims.

C. Claims 5 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Udono in view of design choice.

Applicants respectfully submit that the dependent Claims 5 and 12 are allowable at least to the extent of the independent Claim 1 or 8 to which they refer, respectively. Thus, Applicants respectfully request reconsideration and allowance of these dependent Claims.

D. Claims 7 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Udono in view of design choice as applied to Claims 1 and 8 above, and further in view of German Publication No. DE 1005007602 filed by Grossner (“Grossner”).

Applicants respectfully submit that the dependent Claims 7 and 14 are allowable at least to the extent of the independent Claim 1 or 8 to which they refer, respectively. Thus, Applicants respectfully request reconsideration and allowance of these dependent Claims.

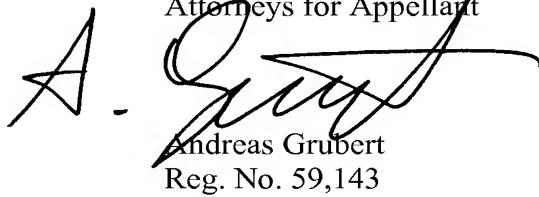
SUMMARY

Appellant authorizes the Commissioner to charge \$510.00 for the Appeal Brief to Deposit Account No. 50-2148 of Baker Botts L.L.P. Appellant believes there are no additional fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Appellant's attorney at 512.322.2545.

Respectfully submitted,

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APPENDIX A - CLAIMS INVOLVED IN APPEAL

1. (Original) A vane cell pump for delivering fluids, comprising a rotor, a cam ring and a plurality of vanes which are pre-tensioned by means of spring elements, the spring elements being an integral part of the rotor, wherein the rotor is made of plastic and the spring elements are captively molded into the rotor.
2. (Original) The vane cell pump according to Claim 1, wherein the spring elements are implemented as spring tongues or as spiral springs.
3. (Original) The vane cell pump according to Claim 1, wherein the spring elements are disposed on a ring.
4. (Original) The vane cell pump according to Claim 1, wherein the spring elements are made of spring steel or plastic.
5. (Original) The vane cell pump according to Claim 1, wherein the vanes and/or the cam ring and/or a side plate and/or a pump casing are made of plastic.
6. (Original) The vane cell pump according to Claim 2, wherein a duroplast is used as the plastic material.
7. (Original) The vane cell pump according to Claim 1, wherein the vane cell pump is used as a pre-supply pump for a high-pressure pump of a common rail injection system.
8. (Original) A vane cell pump for delivering fluids, comprising
 - a plastic rotor having integrated spring elements captively molded into the rotor,
 - a cam ring, and
 - a plurality of vanes whereby the vanes are pre-tensioned by said spring elements.

9. (Original) The vane cell pump according to Claim 8, wherein the spring elements are implemented as spring tongues or as spiral springs.

10. (Original) The vane cell pump according to Claim 8, wherein the spring elements are disposed on a ring.

11. (Original) The vane cell pump according to Claim 8, wherein the spring elements are made of spring steel or plastic.

12. (Original) The vane cell pump according to Claim 8, wherein the vanes and/or the cam ring and/or a side plate and/or a pump casing are made of plastic.

13. (Original) The vane cell pump according to Claim 9, wherein a duroplast is used as the plastic material.

14. (Original) The vane cell pump according to Claim 8, wherein the vane cell pump is used as a pre-supply pump for a high-pressure pump of a common rail injection system.

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APPENDIX B - EVIDENCE

NONE

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APPENDIX C: RELATED PROCEEDINGS

NONE